

## Rymer, Edwina

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**From:** Dorsey, Nancy  
**Sent:** Thursday, April 09, 2015 3:17 PM  
**To:** ellsworth@usgs.gov  
**Cc:** Matt Hornbach;Torres, Jose;Dellinger, Philip;Johnson, Ken-E  
**Subject:** RE: Brine disposal from reverse osmosis

Hi Bill,

Nice presentation at the AGI Critical Issues webinar yesterday—at least the part I caught. There was a webinar before the AGI that ran over. Mike Brudzinski gave a very interesting talk.

I deal mainly with Class II wells or Class I hazardous, neither of which apply here. This type of wells could be either Class V or Class I (non-hazardous). I have forwarded your question to a coworker of mine, Jose Torres, who handles the oversight of the TCEQ UIC program. I will be out for most of the next week. He will most likely contact you while I am out with whatever he finds out.

In the meantime, I did a quick surf of TCEQs website: <http://www14.tceq.texas.gov/epic/eCID/> and [http://www.tceq.texas.gov/permitting/waste\\_permits/uic\\_permits/uic\\_query.htm](http://www.tceq.texas.gov/permitting/waste_permits/uic_permits/uic_query.htm)

The integrated database isn't the most user friendly (or unfriendly) database I have used. The choice of limiting the data to the selected county or the TCEQ Region appears to be primarily decorative. The DFW area is in TCEQ Region 4. It pops up 30 permits, but the first ones are near Corpus Christi in Region 14.

Jose is planning on checking with his TCEQ counterpart and will no doubt have far better luck in finding the answer.

Regards,  
Nancy

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**From:** Bill Ellsworth [mailto:ellsworth@usgs.gov]  
**Sent:** Thursday, April 09, 2015 1:04 PM  
**To:** Dorsey, Nancy  
**Cc:** Matt Hornbach  
**Subject:** Brine disposal from reverse osmosis

Hi Nancy,

I have a question for you about brine disposal in the greater Dallas-Fort Worth area in wells other than UIC Class II. I was recently at Carnegie Mellon University in Pittsburgh talking about induced seismicity, and in a conversation with one of the professors there I was told that there are reverse osmosis plants in the Dallas-Fort Worth area that dispose of the concentrated brine by injection. Since these are not Class II wells, they wouldn't show up at the RRC (or so I am told). I'd be very interested in learning more about them, and hope that you would know something about them or have a lead for me to follow-up.

I've copied my colleague at SMU, Prof. Matt Hornbach, as he too is very interested in this issue. Matt sent me a copy of the 2006 Texas Water Development Report 366 on disposal of desalination waste in Texas. There don't seem to have been any wells in the DFW area, at least at that time the report was prepared.

I should also mention that we have a paper on the Azle-Reno area earthquakes that should be out in Nature Communications (open-access) in the very near future:

Hornbach, M. J., DeShon, H. R., Ellsworth, W. L., Stump, B. W., Hayward, C., Frohlich, C., Oldham, H. R., Olson, J. E., Magnani, M. B., Brokaw, C., and Luetgert, J. H., 2015, Causal factors for seismicity near Azle, Texas: **Nature Communications**, doi:10.1039/ncomms7728.

Matt, I and others at SMU are also trying to make sense of the Irvine earthquakes, and any information about wells in that area that wouldn't appear at the RRC would also be appreciated.

Cheers,

Bill

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